ERS 499

FAMILY-SIZE FARMS IN U.S. AGRICULTURE

ECONOMIC RESEARCH SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

ABSTRACT

Family farms and large-scale farming operations continue proportionally almost unchanged in their traditional regional locations. Family farms account for the bulk of farm production in the north-central part of the country. Large-scale farming is, as it always was, the rule in California, Florida, and some other States. Farming in the rest of the country is in between; family farms have a slight majority. For the country as a whole, family farms accounted for 95 percent of all farms and for 63 percent of all farm products sold in 1949. In 1969, these proportions were 95 percent and 62 percent.

Washington, D.C. 20250 February 1972

FOREWORD

Many people are concerned about the fate of the family farm. They observe the steady shrinkage of farm numbers and the increase of farm sizes as technology transforms agriculture. They fear that it is only a question of time before the family farm is gone.

But what the statistics show is that we still have a mixed agriculture containing: a small but important base of large farms not of traditional family character; a still large and viable set of farm businesses using mostly family labor, but equipped with more capital and other resources than formerly; and a large number of small farms that produce little total product but which add some income to families operating them.

Family farms, those using predominantly family labor, make up about 95 percent of all farms and produce 65 percent of all farm products sold in the United States. Although these percentages have fluctuated slightly, they have been substantially the same for the last 30 years, despite the great decline in total farm numbers.

Thus, family farms still dominate our farming economy. But just as today's independent family-operated supermarket is a different kind of business from the old "mom and pop" grocery stores, the family farm of today is quite different from the ones many of us remember from a generation ago.

Any definition of a "family farm" is necessarily arbitrary. The author of this report defines family farms primarily in terms of those using predominantly family labor. Labor is, of course, only one of the resources used for farming. In fact, many will point out that the most significant changes in farming have been those growing out of increased use of capital and technology.

Unfortunately, data for the 1969 Census of Agriculture were not available at the time this publication was ready for printing. To wait for special tabulations of those data would have unduly delayed publication. Changes in the nature of farming reflected in the 1969 data will no doubt be the subject of later analyses.

Ronald L. Mighell, Chief
Production Resources Branch
FPED-ERS

PREFACE

This report concerns changes in the relative position in U.S. agriculture of family farms and nonfamily farms--those in which either managerial functions or work is performed mainly by hired help. Because on farms in the latter group, families participate less in the work and management, they are referred to as "other-than-family" farms.

In a broad way, this is an updating of earlier reports on this subject. However, it is more than that because new information from a special tabulation of a sample of farms from the 1959 and 1964 Censuses of Agriculture has made possible a more elaborate analysis. The report discusses developments before 1959 only as much as is necessary to provide continuity and to chart changes in the number and sales of farm products of family farms from 1949 to 1964. This report also estimates the number of family farms and sales of farm products from family farms in 1969. The emphasis, however, centers on developments in 1959-64 since data from the 1969 Census of Agriculture are not yet available.

CONTENTS

Page

SUMMARY vi

INTRODUCTION 1

BASIC CONCEPTS AND DEFINITIONS 1
  Family farms 1
  Basis for classification 2

FAMILY FARMS BY SIZE, TYPE, AND REGION 2
  Family farms as a proportion of all farms 2
  Family farms by size of farm 3
  Family farms by kind of farming 3
  Family farms by regions and States 6

PRODUCTION RESOURCES OF FAMILY FARMS 8
  Current production inputs 8
  Land in farms 10
  Farm equipment and machinery 10
  Livestock on farms 13

SELF-EMPLOYED FAMILY LABOR IN FARMING 13

OPERATOR OWNERSHIP OF PRODUCTION RESOURCES 19
  Land tenure 20
  Ownership of farm businesses 23

PART-TIME FARMING UNITS 26

REFERENCES 32

APPENDIX 34

SUMMARY

Family farms and other-than-family farms have decreased in number and increased in size, but family farms still account for 95 percent of all farms and about 60 percent of all farm products sold, percentages that have not changed much during the last two decades.

Family farms continue in their traditional locations in almost unchanged proportions. Family farms account for the bulk of farm production in the Northern Plains, Corn Belt, and Lake States--regions which in 1969 accounted for 44 percent of total national farm production. Other-than-family farms continue to be predominant in California, Arizona, and Florida, and to lead in a number of other States--States which in 1969 accounted for about 28 percent of total farm production. In the rest of the country, family farms constituted a majority.

Family farms are most numerous among cash grain, tobacco, and dairy farms. They are less numerous among vegetable, fruit, cotton, and other field-crop farms.

Three-fourths of the total U.S. value of farmland, livestock inventories, and other farm production resources are found on family farms. More than half of all farm production resources continue to be controlled through farm operator ownership.

Operators and unpaid members of their families continue to be the main labor force in farming. Today, as four decades ago, family labor provides three-fourths of total farm employment.

FAMILY-SIZE FARMS IN U.S. AGRICULTURE

by

Radoje Nikolitch, Agricultural Economist
Farm Production Economics Division
Economic Research Service

INTRODUCTION

People are concerned about the future of the family farm in the United States. The last two decades have witnessed an unprecedented adoption of new technology in agriculture and a substantial reduction in farm population and number of farms. According to the U.S. Bureau of the Census, there were only 44 percent as many persons living on farms and 56 percent as many farms in 1969 as in 1949.

The reduction in number of farms is also associated with a decrease in the number of small farms and a marked increase in the number of large farms [8]. 1/ Such changes raise the question of whether large-scale farming is displacing the family farm in U.S. agriculture.

BASIC CONCEPTS AND DEFINITIONS

No analysis of the position of family farms in the farm economy can be undertaken until two questions are answered: What is meant by a family farm? 2/ How do we distinguish family farms from other farms [6] ?

Family Farms

In this study, the concept of the family farm is equivalent to a family producing unit. In the nonfarm sector, such a unit is called the family store, the family shop, the family mill, and so on [1]. In agriculture, it is called the family farm. The essential characteristics of a family farm are not to be found in the kind of tenure, or in the size of sales, acreage, or capital investment, but in the degree to which productive effort and its reward are vested in the family [5].

The family farm is a primary agricultural business in which the operator is a risk-taking manager, who with his family does most of the farmwork and performs most of the managerial activities. 3/

1/ Numbers in brackets refer to items in References, p. 32.

2/ In the absence of a generally accepted definition of family farm, any specific definition reflects its author's own conceptual bias. Therefore, whenever "family farm" is mentioned in this report it should be associated with the qualifying phrase: "as defined in this report."

3/ Farms are defined as "primary agricultural businesses," distinct from other nonfarm agricultural businesses, which are also direct or indirect participants in the production and marketing of the national supply of food and fiber.

Basis for Classification

As a working basis, all farms (not operated by hired managers) that use less than 1.5 man-years of hired labor are considered to be family farms, because it is assumed that the average farm family supplies 1.5 man-years of labor. 4/

The extent to which a census-reported farm (not operated by a hired manager) uses more or less than 1.5 man-years of hired labor is used to classify it as a family farm or not [13]. For such measurement, data are available from a special tabulation of the censuses of 1959 and 1964.

FAMILY FARMS BY SIZE, TYPE, AND REGION

Family farms continue to be the mainstay of the farm economy, but their relative distribution changes greatly by size, by type, by commodities produced, and by regions and States. In some States, such as California, Florida, and a few others, other-than-family farms are predominant. These are mostly large-scale farms. Similarly, large-scale farming is more evident for certain kinds of farming; for example, for fruits, vegetables, some field crops, and cotton.

Family Farms as a Proportion of All Farms

There are about 2 million fewer farms today than two decades ago, a decrease from about 5 million in 1949 to an estimated 3 million in 1969--an average yearly decrease of 100,000 farms.

The fact that small farms accounted for a substantial part of the decreasing number of farms has frequently been misinterpreted as evidence of the shrinking economic importance of family farms.

It is true that most of the reduction in small farms came in family-operated units, and that in 1969 more than half of all family farms were still small units with less than $5,000 worth of farm product sales. These small units, as explained in one of the last sections of this report (pp. 26-27), are mostly part-time farming operations whose operators' families depend more on nonfarm than on farm income for their livelihood. But it should be also kept in mind that the numerous part-time farming units accounted for less than 10 percent of all sales by family farms in 1969. Moreover, the critical question for ascertaining the future of family farms is whether the smaller units that disappear are being replaced more rapidly by bigger family farms or by other-than-family farms. As shown below, family farms with more than $10,000 worth of farm product sales seem to be most rapidly substituting for the disappearing small farms.

Thus, despite a marked reduction in the number of small farms, the proportion of all farms that were family farms remained the same from 1949 to 1969, and their share of marketing changed little. 5/ Estimates

---

4/ See appendix, page 34, for procedure used in measuring man-years of hired labor on farms, and for procedure used in measuring family labor supply.

5/ The index numbers of prices received by farmers did not change enough during 1949-64 to warrant an adjustment in prices here. Expressed in 1957-59 prices, the index was 104 in 1949, 99 in 1959, and 98 in 1964.

for 1969 show that family farms accounted for 95 percent of all farms and 62 percent of the value of all farm products sold. This is almost the same as in 1949, when these proportions were 95 and 63 percent. Family farms, at the same time, expanded rapidly in the size classes with $10,000 or more sales of farm products. It is estimated that from 1949 to 1969 the number of these larger family farms and their share in total farm production more than doubled [9]. The number of family farms with sales of $10,000 or more increased from 340,000 in 1949 to 807,000 in 1969. They accounted for an estimated 48 percent of all farm products sold in 1969, compared with 21 percent in 1949 (table 1).

Family Farms by Size of Farm

Family farms constitute a large proportion of those having low sales of farm products. In 1964, family farms accounted for only 14.5 percent of the number and 8.4 percent of the sales of farm products of farms with sales of $100,000 or more [12]. But they accounted for 99.8 percent of farm numbers and 99.7 percent of farm product sales on farms with less than $5,000 of sales.

A comparison of 1964 census data with 1959 data shows an increase in both the proportion of family farms and their share of total farm marketings by all sales groups of farms. These trends are contrary to the trend for all farms (table 2).

The apparent discrepancy between the trend for all family farms and trends by each of their sales groups is due to the changing proportion of farms in different sales groups, and especially to the large decrease in the number of small family farms.

The increase in number of family farms in the large-size groups is due to two developments. First, the pressure of changing economic and technological conditions causes all farmers to increase the size of their operations. Second, the widespread substitution of capital for labor is shifting some previously other-than-family farms into the class of larger family farms as defined in this report.

Family Farms by Kind of Farming

An impression among nonfarm people is that mechanization and other changes in technology are not as accessible to family farms as to larger operations. The wide prevalence of family farms is sometimes taken as evidence that available technology has not reached many U.S. farms. But such an inference is not well founded. In wheat and other types of cash-grain farming, for example, many operations are well mechanized. Yet these are among the types of farming in which family farms are most prevalent. In 1964, about 97 percent of all cash-grain farms were family units, and they accounted for 85 percent of total annual sales by all cash-grain farms. In contrast, operations on fruit and vegetable farms are least mechanized; yet in these types of farming, family farms are much less important. In 1964, family farms accounted for 83 percent of all vegetable farms, but for only 15 percent of total annual sales by all vegetable farms. For fruit and nut farms, the proportions were 83 percent and 29 percent.

Table 1.--Number of farms and sales of farm products by all farms, other-than-family farms, and family farms, and as a percentage of all farms, 1949, 1959, 1964, and 1969 1/

Class and size of farm	Number of farms 2/				Sales of farm products 2/			
	1949 3/	1959	1964	1969 4/	1949 3/	1959	1964	1969 4/
	1,000 farms				Million dollars			
All farms	4,905	3,695	3,150	2,726	22,280	30,362	35,075	44,026
Other-than-family farms	264	165	154	146	8,250	9,226	12,427	16,730
Family farms	4,641	3,530	2,996	2,580	14,030	21,136	22,648	27,296
Less than $10,000 sales	4,301	2,892	2,271	1,773	9,282	8,391	6,413	6,164
$10,000 or more sales	340	638	725	807	4,748	12,745	16,235	21,132
	Percent of all farms				Percent of all sales			
All farms	100	100	100	100	100	100	100	100
Other-than-family farms	5	5	5	5	37	30	35	38
Family farms	95	95	95	95	63	70	65	62
Less than $10,000 sales	88	78	72	65	42	28	18	14
$10,000 or more sales	77	17	23	30	21	42	47	48

1/ Any farm not operated by a paid manager and using less than 1.5 man-years of hired labor is classified as a family farm. Any farm using 1.5 or more man-years of hired labor or operated by a paid manager is classified as an other-than-family farm.

2/ Institutional farms and farms in Alaska and Hawaii not included.

3/ 1949 corrected for change in farm definition in 1959. Sharecropper operations not considered as independent farms but as parts of respective multiple-unit operations.

4/ Estimated by projecting census information.

Source: Data derived from special tabulations by the Bureau of the Census from the 1959 and 1964 Censuses of Agriculture.

Table 2.--Number of farms and sales of farm products by family farms and other-than-family farms, and as a percentage of all farms in each sales group, 1959 and 1964 1/

Value of sales of farm products	1959				1964			
	Family farms		Other-than-family farms		Family farms		Other-than-family farms	
Number of farms: 2/	Number	Percent 3/	Number	Percent 3/	Number	Percent 3/	Number	Percent 3/
All farms........	3,529,998	95	164,818	5	2,996,296	95	154,106	5
$100,000 or more..........	2,148	11	17,713	89	4,527	14	26,756	86
$20,000-99,999.	196,785	68	92,435	32	279,347	75	93,962	25
$5,000-19,999	1,084,965	96	48,090	4	946,633	97	29,398	3
Less than $5,000........	2,246,100	100	6,580	3/	1,765,789	100	3,990	3/
Sales of farm products: 2/	Mil. dol.	Percent 3/	Mil. dol.	Percent 3/	Mil. dol.	Percent 3/	Mil. dol.	Percent 3/
All farms........	21,136	70	9,226	30	22,648	65	12,427	35
$100,000 or more..........	342	7	4,528	93	705	8	7,676	92
$20,000-99,999.	6,262	61	4,031	39	9,272	68	4,381	32
$5,000-19,999..	10,767	94	649	6	9,925	96	363	4
Less than $5,000........	3,765	100	18	4/	2,746	100	7	4/

1/ For definitions of "family farm" and "other-than-family farm," see footnote 1, table 1.

2/ Institutional farms and farms in Alaska and Hawaii not included, except farms in Alaska with $100,000 or more of farm products sold.

3/ Percentage of all farms in each value-of-sales groups.

4/ Less than 0.5 percent.

Source: See table 1.

Cash-grain, tobacco, and dairy farms have the largest proportions of family farms, and they accounted for the largest share of marketings in 1964--85, 82, and 77 percent, respectively. The share of marketings by family farms is much smaller for vegetable, other field crop, and fruit farms--amounting to only 15, 30, and 29 percent of total 1964 sales by these types of farms (table 3).

The proportion of farms that are family farms decreases as the size of farm increases for each type of farm. On farms with $100,000 or more of sales, family farms' share of total marketings is significant only on livestock (other than dairy), poultry, and cash-grain farms--where they accounted for 17, 11, and 5 percent of all 1964 sales. The largest class of family livestock and poultry farms has a relatively large percentage of sales because of the value added to a base of large purchases of live animals and feed, which makes gross sales much larger than for many other types which have smaller cash expenditures. On cash-grain farms, the use of machinery and other capital inputs enables self-employed family labor and management to run relatively large cash-grain operations (table 3).

Two further observations about the smaller percentage of family farms in certain types of farming are pertinent. First, the provision for inputs, marketing, and processing may for technical reasons be closely tied to production. These stages of agricultural production are more adapted to a concentration of capital, management, and labor than are crop and animal production. As a result, some farms tend to develop into larger business sizes, and the patterns of organization found in nonfarm industries are more prevalent. This is true of farms producing vegetables, fruits, eggs, broilers, and fed cattle.

Second, farms specializing in the production of the above-specified livestock and poultry products are characterized by dependence on inputs produced on other farms. But this fact does not lessen their economic importance or business size in other respects. The size of a business is determined by the value of its inputs or by the value of its output. Buying and selling, as well as managing and working, are all-important economic activities and together shape the size of a business.

Family Farms by Regions and States

In both 1959 and 1964, family farms accounted for 98 percent of all farms in the Lake States, Corn Belt, and Northern Regions. The percentage was smallest in the Pacific Region--87 percent of all farms in both years. In the other regions, the percentage ranged from 89 to 96 percent, with little significant change from 1959 to 1964 6/. However, the proportion of family farms generally increased in each sales group of farms in all regions.

The same differences in trends are also evident in the regional analysis of family farm marketings by size of farm. While their share of marketings decreased in all regions, it generally increased in each sales group of farms. Family farm shares of total farm products sold in 1964 were highest in the Lake States, Corn Belt, and Northern Plains--86, 87, and 82 percent. These were slight decreases from 1959. The share

---

6/ For division by regions, see appendix, pp. 34 and 35.

Table 3.--Family farms as a percentage of all farms, 1959 and 1964, and sales from family farms as a percentage of all farm sales, by type and sales class of farm, 1964 1/

Type of farm	Family farms as a percentage of all farms 2/		Percentage of total farm products sold by family farms, 1964 3/				
	1959	1964	All farms	$100,000 or more	$20,000 to $99,999	$5,000 to $19,999	Less than $5,000
	Percent						
Cash grain	98	97	85	5	81	98	99
Tobacco	98	97	82	1	36	94	98
Cotton	92	90	42	1	35	91	100
Other field crop	86	80	30	2	47	88	100
Vegetable	86	83	15	1	21	76	100
Fruit and nut	88	83	29	3	32	86	98
Poultry	96	92	57	11	81	97	100
Dairy	95	94	77	2	68	98	99
Other livestock (other than poultry and dairy) 4/	97	97	69	17	81	98	100
General	95	95	70	2	64	99	100
Miscellaneous	86	96	29	1	23	73	94
Total	95	95	65	8	68	96	100

1/ For the definition of "family farm," see footnote 1, table 1.

2/ Institutional farms and farms in Alaska and Hawaii not included, except farms in Alaska with $100,000 or more of farm products sold.

3/ Estimated on the basis of special tabulations from the Bureau of the Census for 1959 and 1964.

4/ Includes livestock ranches.

Source: See table 1.

of family farms in total farm marketings was smallest in the Pacific Region--amounting to 36 percent in 1959 and 29 percent in 1964 (table 4).

Greater production on a smaller number of larger farms is a general trend also evident for family farms. In all regions, small family farms have been disappearing rapidly in the last two decades, while the economic importance of larger family farms has expanded.

Several other observations may be made concerning regional differences in the relative significance of family farms. Where family farms are most numerous, mechanization and other forms of technology are as developed as in any other part of the country.

A few types of farms, because of specific characteristics of production, tend to adapt themselves to the organizational pattern of large-scale nonfarm businesses. Such types of farms lead in the regions where family farms are of less importance. This suggests that regional differences are related to types of farming.

However, there were also historical differences between regions in the development of the structural organization of farming. The family pattern of organization of the first colonists in the East and in the Midwest still influences these parts of the country. In a different way, the plantation system in the South and the Spanish latifundia heritage in California, Arizona, New Mexico, Texas, and Florida influenced the development of these areas.

The structural organization of the farming industry differs even more by States. With regard to the relative importance of family farms, States were grouped into three broad regional divisions. The first division includes the north-central part of the country, with a high predominance of family farms. The second includes California, Arizona, Florida, and some scattered States where more than half of the farm production is organized on the basis of other-than-family farms. Farming in the rest of the country has a slight predominance of family farms. The States in each of these three divisions were divided into three categories: those in which family farms accounted for 75 percent or more of all farm products sold, those in which sales ranged from 50 to 74 percent, and those in which family farms accounted for less than 50 percent of all sales of farm products (fig. 1).

The great structural diversity is well illustrated by comparing the structure of farming in Iowa and California, two States with highly developed agriculture, but in which production is very differently organized. The relative importance of family farms in each State stands out. In 1964, family farms accounted for 91 percent of all sales of farm products in Iowa, but for only 21 percent in California (fig. 1).

PRODUCTION RESOURCES OF FAMILY FARMS

The position of family farms in U.S. agriculture is shown also by the large proportion of farm production resources they use.

Current Production Inputs

Family farms are the main users of farm inputs. They operate most of the farmland and the bulk of the farm machinery and equipment. The largest proportion of the livestock inventory is on family farms.

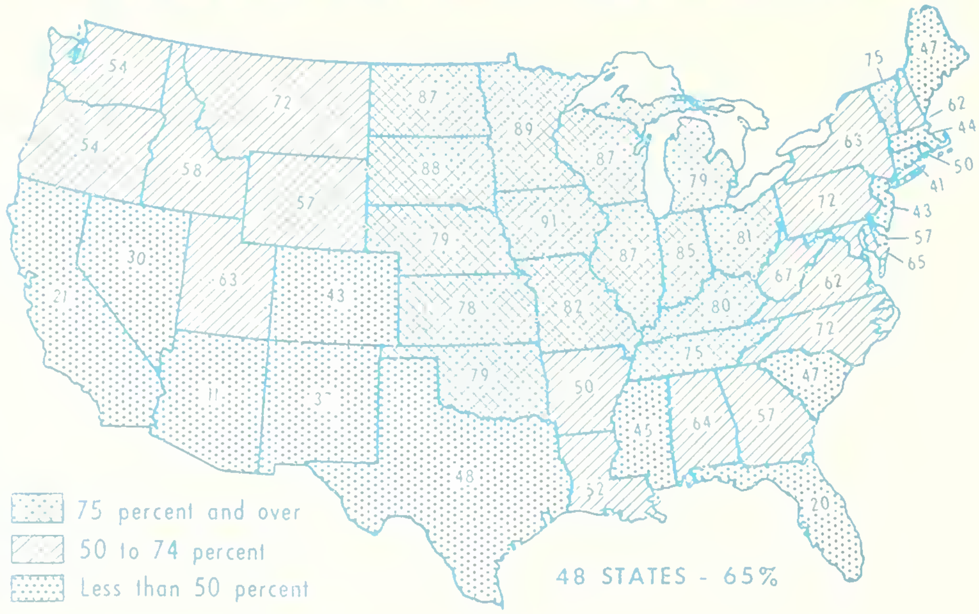
Table 4.--Number of farms and sales of farm products by family farms as a percentage of all farms, by sales groups and by regions, 1959 and 1964 1/

Region and year	Number of farms 2/					Sales of farm products 2/				
	Total	$100,000 or more	$20,000-$99,999	$5,000-$19,999	Less than $5,000	Total	$100,000 or more	$20,000-$99,999	$5,000-$19,999	Less than $5,000
	Percent									
New England:										
1959	91	8	61	92	99	64	6	56	90	99
1964	89	7	65	95	100	51	4	57	94	100
Middle Atlantic:										
1959	92	7	52	94	99	66	4	43	93	99
1964	93	11	68	96	100	65	7	60	95	100
Lake States:										
1959	98	14	78	99	100	90	10	73	99	100
1964	98	21	85	99	100	86	15	79	99	100
Corn Belt:										
1959	98	28	90	99	100	90	20	86	98	100
1964	98	40	91	99	100	87	28	87	99	100
Northern Plains:										
1959	98	33	88	99	100	86	28	84	99	100
1964	98	42	91	99	100	82	26	87	99	100
Appalachian:										
1959	97	5	39	90	3/100	76	3	35	85	3/99
1964	96	6	52	95	100	73	5	46	93	100
Southeast:										
1959	94	3	43	85	99	52	2	37	80	99
1964	94	6	53	90	99	44	4	47	87	99
Delta States:										
1959	95	2	37	87	100	58	2	29	82	100
1964	92	5	56	92	100	49	4	47	90	100
Southern Plains:										
1959	93	8	51	94	3/100	58	6	43	93	3/99
1964	94	9	60	95	100	55	5	51	94	100
Mountain:										
1959	92	12	65	97	100	55	6	57	97	100
1964	91	9	67	96	3/99	46	4	59	96	3/100
Pacific:										
1959	87	6	59	91	100	36	3	50	88	100
1964	87	8	61	95	100	29	4	53	94	100
United States: 1/										
1959	95	11	68	96	100	70	7	61	94	100
1964	95	14	75	97	100	65	8	68	96	100

1/ For the definition of "family farm," see footnote 1, table 1.
2/ Institutional farms and farms in Alaska and Hawaii not included, except for farms in Alaska with $100,000 or more of farm products sold.
3/ The apparent inconsistency in the relation of percentages between number of farms and sales is due to rounding.

Source: See table 1.

FIG. 1.--SALES OF FARM PRODUCTS BY FAMILY FARMS AS A PERCENTAGE OF TOTAL SALES OF FARM PRODUCTS, 1964



In 1964, the total value of purchased farm inputs amounted to $17 billion--of which 59 percent or $10 billion was purchased by family farms. Except for hired labor, large proportions of all other current production inputs were bought by family farms. Family farms accounted for 68 percent of the total commercial fertilizer bought by all farms in 1964, 83 percent of all feed, 60 percent of all purchased livestock and poultry, 67 percent of all seed, 75 percent of all gasoline, and 64 percent of all machine hire. However, only 28 percent of total hired farm labor was employed on family farms (table 5).

Land in Farms

From 1959 to 1964, there were no significant regional or national changes in the proportion of farmland operated by family farms. In both these years, family farms operated about three-fourths of the total value of farm real estate. In 1964, family farms accounted for 82 percent of all cropland harvested, and for 60 percent of land in pasture. They accounted for the highest proportion of farmland in the Lake States, Corn Belt, and Northern Plains--more than 90 percent; and for the smaller proportion in the Pacific Region--48 percent (table 6).

Farm Equipment and Machinery

Information in the census of agriculture on farm machinery and equipment is given only in terms of number of machines. Comparison of numbers

Table 5.--Annual purchases of specified current inputs by family farms as a percentage of those by all farms, by regions, 1964 1/

Current production inputs	United States	New England	Middle Atlantic 2/	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta States	Southern Plains	Mountain States	Pacific 3/
	Percent											
Commercial fertilizer	68	44	65	87	89	90	76	48	56	48	48	31
Lime	83	66	76	92	91	94	80	48	59	48	0	71
Feed for livestock and poultry	65	67	71	84	84	72	66	55	69	55	36	32
Livestock and poultry	60	69	70	84	80	66	67	53	67	53	32	21
Seeds, bulbs, etc.	67	36	51	84	86	90	70	47	51	47	55	27
Gasoline, etc.	75	57	72	92	90	92	77	54	49	54	65	43
Machine hire	64	63	70	93	93	89	81	45	58	45	55	31
Hired labor	28	19	26	47	49	60	44	17	20	17	25	12

1/ For the definition of "family farm," see footnote 1, table 1. However, in this table, farms with hired management having less than 1.5 man-years of hired labor are included in family farms.

2/ New York, New Jersey, Pennsylvania, Delaware, and Maryland.

3/ Alaska and Hawaii not included.

Source: See table 1.

Table 6.--Land in farms, land in pasture, cropland harvested, and value of family farm real estate as a percentage of corresponding items on all farms, by regions, 1959 and 1964 1/

Land use or value for family farms	United States	New England	Middle Atlantic 2/	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta States	Southern Plains	Mountain States	Pacific 3/
	Percent											
Land in farms:												
1959	[illegible]	80	85	96	[illegible]	89	80	63	69	60	55	57
1964	72	[illegible]	83	94	93	87	[illegible]	61	67	61	54	55
Land in pasture 4/:												
1959	58	81	87	96	92	82	85	45	74	50	50	52
1964	60	80	87	96	94	80	86	50	76	54	51	52
Cropland harvested:												
1959	84	74	79	96	94	93	82	68	54	71	77	51
1964	82	72	80	94	92	92	79	58	48	71	73	48
Value of land and buildings:												
1959	77	78	77	93	93	92	84	60	68	69	67	49
1964	74	70	73	92	91	90	81	56	59	69	63	48

1/ For the definition of "family farm", see footnote 1, table 1.
2/ New York, New Jersey, Pennsylvania, Delaware, and Maryland.
3/ Alaska and Hawaii not included.
4/ Other than cropland and woodland pasture.

Source: See table 1.

overestimates the relative importance of farm machinery on family farms because no allowance can be made for differences in size or value. However, an analysis based only on numbers indicates that family farms are well mechanized. No significant change in the relative mechanization of family farms took place from 1959 to 1964. Differences in relative mechanization by regions emphasize again the family pattern of production in the Lake States, Corn Belt, and Northern Plains Regions (table 7).

In U.S. agriculture, farmers have traditionally owned most of the machinery needed in farm production [14]. In 1964, most of the cultivating of crops and land--94 percent--was done by farmers with their own equipment 7/. Even with crops that are combine-harvested, where custom work has been most prevalent, farmers predominantly own the combine-harvesters. Of the 153 million acres that were combine-harvested in 1964, 72 percent were harvested with farmers' own combines [15].

The widespread belief that machine-hire and custom and contract work are expanding does not seem to be supported by census data. From 1949 to 1964, neither the proportion of census farms reporting custom and contract work nor the expenditure on such work increased as a proportion of the value of all farm products sold (table 8).

Livestock on Farms

The count of livestock on farms on the day of enumeration for both the 1959 and 1964 censuses 8/ shows that family farms had the greater part of that inventory. In 1964, family farms accounted for 77 percent of all the cattle and calves on farms, 84 percent of all milk cows, 92 percent of all hogs and pigs, 64 percent of all sheep and lambs, and 64 percent of all chickens 4 months old and over. These percentages, however, varied greatly by regions--the larger percentages were in the Lake States, Corn Belt, and Northern Plains Regions, and the smaller percentages were in the Mountain and Pacific Regions.

There were few significant changes in the percentages of livestock other than poultry on family farms from 1959 to 1964, except in the Mountain and Pacific Regions, and for milk cows on family farms in the Southeast Region; percentages of these decreased markedly. The percentages of chickens on family farms decreased in all regions. In 1959, family farms accounted for 86 percent of all chickens 4 months old and over on farms; in 1964, the percentage decreased to only 64 percent (table 9).

SELF-EMPLOYED FAMILY LABOR IN FARMING

Use of labor on farms has declined rapidly because of the substitution of capital for labor [16, 17]. About 70 percent less labor is now used on farms to produce 36 percent more food and fiber than at the end of World War II. A crucial question with regard to family farms is whether this substitution of capital for labor has displaced more family labor or hired labor [7].

7/ Statistical information is not available, but fragmentary reports indicate little trend in rental of farm machinery.

8/ The average dates of enumeration were Dec. 2 for the 1964 census, and Nov. 22 for the 1959 census.

Table 7.--Specified equipment and facilities on family farms as a percentage of those on all farms, by regions, 1959 and 1964 1/

Region and year	Auto-mobiles	Motor-trucks	Tractors other than garden	Grain and bean combines	Pickup balers	Corn pickers	Milking machines	Electric milk coolers	Bulk milk tanks
	Percent								
New England:									
1959	88	76	79	51	80	32	86	86	---
1964	[illegible]	73	78	58	85	70	88	---	86
Middle Atlantic: 2/									
1959	90	80	84	88	89	86	91	91	---
1964	90	79	85	88	91	87	92	---	85
Lake States:									
1959	98	[illegible]	97	98	98	97	99	98	---
1964	97	94	96	97	98	98	98	---	96
Corn Belt:									
1959	97	94	96	97	97	98	98	98	---
1964	97	94	95	96	96	96	98	---	95
Northern Plains:									
1959	97	95	96	97	97	98	98	97	---
1964	97	94	95	96	96	98	98	---	97
Appalachian:									
1959	94	90	88	83	84	85	87	87	---
1964	93	90	88	82	88	84	89	---	75
Southeast:									
1959	88	79	77	65	57	72	64	64	---
1964	87	77	74	62	66	73	53	---	43
Delta States:									
1959	90	84	70	56	70	57	89	88	---
1964	88	82	69	52	75	69	88	---	80
Southern Plains:									
1959	89	82	80	81	84	88	89	88	---
1964	91	84	82	82	86	90	87	---	84
Mountain:									
1959	86	80	80	88	85	86	94	92	---
1964	85	77	80	86	85	83	92	---	81
Pacific: 3/									
1959	82	67	66	71	79	41	89	81	---
1964	82	68	66	69	82	59	84	---	74
United States: 3/									
1959	93	86	88	92	96	95	95	93	---
1964	93	86	88	91	92	94	95	---	89

1/ For the definition of "family farm," see footnote 1, table 1.
2/ New York, New Jersey, Pennsylvania, Delaware, and Maryland.
3/ Alaska and Hawaii not included.

Source: See table 1.

Table 8.--Expenditures for machine hire and custom and contract work, 1949, 1954, 1959, and 1964

Year	Expenditures for machine hire and custom and contract work	Farms reporting as a percentage of all farms	Expenditures as a percentage of value of--	
			All farm products sold	All crops sold
	Million dollars	Percent	Percent	Percent
1949 1/....	612	51.2	2.7	6.2
1954 2/....	638	53.2	2.6	5.2
1959.......	805	53.7	2.6	6.0
1964 3/....	870	52.0	2.5	5.3

1/ Data for Alaska not included.
2/ Data for Alaska and Hawaii not included.
3/ Expenditure for cotton ginning excluded in 1964 only.

Source: 1964 Census of Agriculture, vol. II, ch. VI and VII.

In the last decade, the proportion of work done on farms by family labor and by hired labor did not change much. An analysis based on the wage bill shows that these proportions were 68 and 32 percent throughout the 1960's. Bureau of Labor Statistics data show a somewhat higher proportion of family work done on farms--70 to 71 percent. In an estimate based on a special survey by the Bureau of the Census for the period between March 1965 and March 1966, family labor accounted for 72 percent of work done on all farms and for 61 percent of work done on farms with $10,000 or more of sales of farm products [20]. On the basis of a survey by USDA's Statistical Reporting Service, family labor accounted for about 77 percent of the total work done on farms in 1969 [19].

The predominance of family labor in farming is shown also by the great number of farms with little or no hired labor. A classification of farms by use of hired labor indicates that family labor is dominant on a majority of American farms. In both 1959 and 1964, about 50 percent of all farms used no hired labor and they accounted for about 20 percent of all farm products sold.

Farms using 15 or more man-years of hired labor accounted for only about 10 percent of total farm sales in each year (table 10). In 1964, there were 7,573 such farms and they sold about $3.8 billion worth of farm products. The importance of these large farms varies greatly by region. Their 1964 share of total farm sales ranged from 31 percent in the Pacific Region to only 2 percent in the Corn Belt. In contrast, farms with no hired labor accounted for 26 percent of total sales in the Corn Belt (33 percent in the Lake States) and only 7 percent in the Pacific Region (table 11).

Table 9.--Numbers of livestock on family farms as a percentage of total numbers, by regions, 1959 and 1964 1/

Livestock and year	United States 2/	New England	Middle Atlantic 3/	Lake States	Corn Belt	Northern Plains	Appalachian	Southeast	Delta States	Southern Plains	Mountain States	Pacific 2/
	Percent											
Cattle and calves:												
1959	78	74	81	96	92	86	79	55	76	69	61	52
1964	77	76	83	95	91	85	81	56	75	70	59	50
Milk cows:												
1959	86	74	82	97	96	97	82	55	86	78	85	57
1964	84	75	83	96	95	97	80	39	80	74	75	49
Hogs and pigs:												
1959	92	48	78	96	95	97	86	84	84	85	86	58
1964	92	65	77	96	94	96	83	79	86	82	80	66
Sheep and lambs:												
1959	66	70	90	95	94	90	80	62	69	59	44	51
1964	64	87	94	96	93	84	84	67	79	63	41	45
Chickens 4 months old and over:												
1959	86	70	81	97	97	99	81	64	73	89	80	76
1964	64	57	65	89	83	96	62	44	52	53	62	40

1/ For the definition of "family farm," see footnote 1, table 1.

2/ Institutional farms and farms in Alaska and Hawaii not included, except for farms in Alaska with $100,000 or more of farm products sold.

3/ Includes New York, New Jersey, Pennsylvania, Delaware, and Maryland.

Source: See table 1.

Table 10.--Distribution of farms and sales of farm products, by specified number of man-years of hired labor, 1959 and 1964 1/

Man-years of hired labor	Farms 1959	Farms 1964	Farm products sold 1959	Farm products sold 1964
	Percent			
None	52	50	21	19
Less than 0.5	37	38	32	31
0.5-0.9	5	5	8	8
1.0-1.4	2	3	7	7
1.5-2.4	2	2	7	7
2.5-4.9	2	2	7	8
5.0-6.9	2/	2/	3	3
7.0-9.9	2/	2/	3	3
10.0-14.9	2/	2/	3	3
15.0 or more	2/	2/	9	11
All farms	100	100	100	100

1/ Alaska and Hawaii not included. 2/ Less than 0.5 percent.

Source: See table 1.

Table 11.--Regional percentage of all sales of farm products sold by farms classified by number of man-years of hired labor, 1964

Region	None	0.1-0.9	1.0-4.9	5.0-9.9	10.0-14.9	15.0 or more
	Percent					
New England	13	29	33	10	3	12
Middle Atlantic	20	36	26	7	3	8
Lake States	33	49	12	2	1	3
Corn Belt	26	54	15	2	1	2
Northern Plains	26	50	16	3	2	3
Appalachian	18	46	24	5	2	5
Southeast	15	24	23	9	5	24
Delta States	16	26	27	12	6	13
Southern Plains	14	33	32	8	3	10
Mountain	11	29	29	9	5	17
Pacific 1/	7	17	26	13	6	31
Total 1/	19	39	22	6	3	11

1/ Alaska and Hawaii not included.

Source: See table 1.

The use of hired labor on farms, as well as its economic importance, varied even more by States (tables 19, 20, and 21). In 1964, farms with 15 or more man-years of hired labor accounted for 52 percent of total farm products sold in Florida, 42 percent in Arizona, and 37 percent in California, but for less than 1 percent in Iowa, North Dakota, and South Dakota. Average sales per farm on such farms varied from $1 million in Arizona to $230,000 in South Dakota (table 22).

The predominance of operator and other family labor in American farming is of long standing. Recent economic, social, and technological changes have not lessened its importance. The proportion of family labor employed on farms has remained about the same since 1930. In the country as a whole, family labor accounted for 76 percent of total farm employment during 1930-39 and 75 percent in 1969 [19].

Family labor employment in farming varies greatly by geographic region. 9/ The highest proportion of family labor, more than 86 percent of total farm employment, is found in the East North Central and West North Central Regions. The smallest is found in the Mountain Region and especially in the Pacific Region (table 12).

Table 12.--Family labor as a percentage of total regional farm employment, 1930-69 1/

Census of agriculture regions	Percentage of total farm employment in--				
	1930-39	1940-49	1950-59	1960-69	1969
	Percent				
United States 2/	76	77	75	74	75
New England	60	70	64	64	63
Middle Atlantic	68	71	71	74	77
East North Central	79	84	85	86	88
West North Central	80	84	85	86	87
South Atlantic	78	79	74	69	70
East South Central	85	84	81	78	80
West South Central	75	71	68	65	68
Mountain	60	62	63	63	60
Pacific	54	53	51	48	43

1/ Based on annual averages of monthly data of persons employed (including farm operators) during the last full calendar week ending at least 1 day before the end of each month.

2/ Alaska and Hawaii not included.

Source: Various issues of "Farm Labor," U.S. Dept. Agr., Statis. Rptg. Serv., Crop Reporting Board.

9/ For geographic regions as delimited by the Bureau of the Census, see appendix, p. 35.

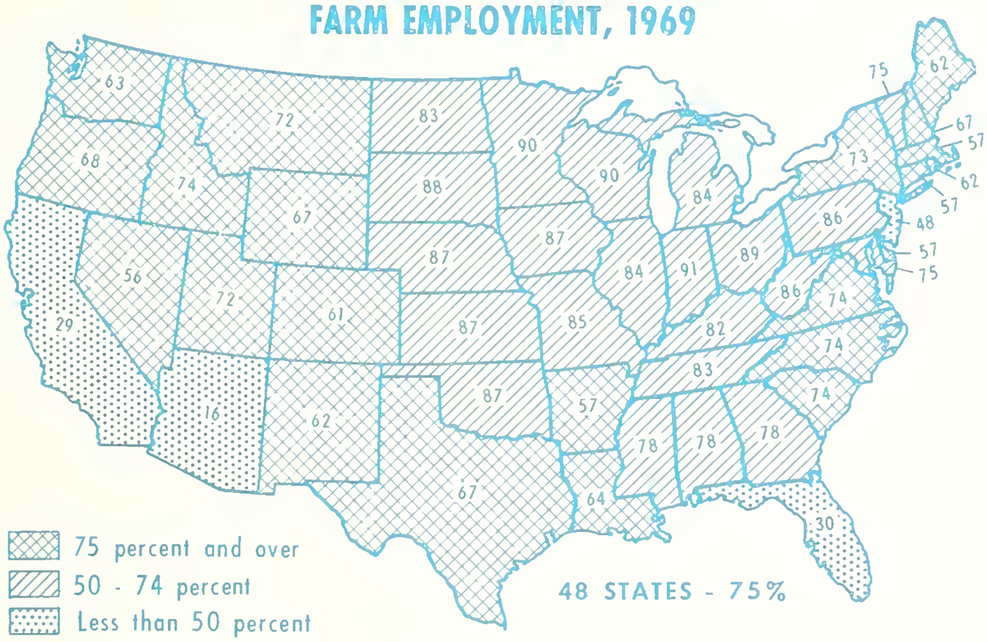
The variation in family labor employed on farms is even more pronounced by States. In 1969, it ranged from 90 percent in Minnesota and Wisconsin to only 16 percent in Arizona. In 1969, besides Arizona, only three States had less than 50 percent of family labor employed in farming--Florida, 30 percent; California, 29 percent; and New Jersey, 48 percent (fig. 2).

Farmers--as self-employed entrepreneurs--are about the same average age as their counterparts in other occupations. Farmers on larger farms, however, tend to be younger than self-employed persons in nonfarm occupations [10].

OPERATOR OWNERSHIP OF PRODUCTION RESOURCES

There is little available information that would permit a direct measurement of changes in the extent of operator control over farm production resources, but general observation suggests that there has not been much change in two decades.

FIG. 2.--FAMILY LABOR AS A PERCENTAGE OF TOTAL FARM EMPLOYMENT, 1969



SOURCE: U.S. DEPARTMENT OF AGRICULTURE, STATISTICAL REPORTING SERVICE, "FARM LABOR", MARCH 1970.

U.S.DEPARTMENT OF AGRICULTURE NEG. ERS 8471-71 (12) ECONOMIC RESEARCH SERVICE

Land Tenure

Little change has been evident in traditional U.S. land tenure patterns. 10/ During 1944-64, the proportion of land operated under ownership, rental, and paid management did not change significantly. Throughout this period, about 55 percent of land in farms was operated by owners, 35 percent by renters, and 10 percent by paid managers (table 13).

The proportion of all farmland owned and operated by farmers continues almost unchanged, but there has been a significant increase in the number of part-owner farms, which combine both ownership and rental in the same farming operation. Thus, the proportion of total farmland operated by part-owners increased from 15 percent in 1910 to 48 percent in 1964 (fig. 3).

Census data show a decrease between 1949 and 1964 in the number and proportion of commercial farms with $2,500 or more of sales operated by paid managers. Data for 1959 and 1964 show that the number of farms operated by paid managers also decreased proportionally in all economic classes of farms with sales above $10,000, including the largest group with sales of $100,000 or more (table 14).

The share of total marketings by farms operated by hired managers increased at about the same rate as those of other large farms. In 1959, farms operated by paid managers accounted for 5.4 percent of the total marketing of all commercial farms, and farms with $40,000 or more of sales accounted for 32.8 percent of these total sales. These proportions increased in 1964 to 7.2 percent and 43.7 percent, respectively. This, however, is due to different causes. Farms operated by paid managers decreased in number and increased their business sizes considerably. Farms with sales of $40,000 or more, on the other hand, increased considerably in number and much less in their sizes. In 1964, there were 1,856 fewer commercial farms operated by paid managers than in 1959, but their average sales increased from $94,000 to $163,000. There were, on the contrary, 39,800 more farms with sales of $40,000 or more in 1964 than in 1959, and their average size increased only from $95,000 to $106,000.

The proportion of farms operated by paid managers varies among States. Farms operated by paid managers are heavily concentrated in California, Texas, and Florida--accounting for 30 percent of the 1964 national total of all farms operated by paid managers, for 37 percent of their total farmland, and for 49 percent of their total sales. In 1964, marketings by farms operated by paid managers accounted for 35 percent of all sales by commercial farms in Florida, 20 percent in California, 27 percent in Arizona, 26 percent in Nevada, and 23 percent in Connecticut. Elsewhere farms operated by paid managers are of much less significance. In the Northern Plains, Corn Belt, and Lake States, sales by farms under paid management accounted for less than 3 percent of total farm marketings in 1964 (fig. 4).

10/ We are speaking here of the tenure under which farmland is operated, disregarding the composition of operating units. For example, in a part-owner farm, part of the land is owned by the operator and part is rented.

Table 13.--Tenure under which farmland was operated, total farmland, specified years, United States

Year	Total farmland 1/	Percentage of farmland operated under--2/		
		Ownership	Rental	Paid management
	Million acres	Percent		
1944 3/	1,142	53	38	9
1949	1,161	56	35	9
1954 3/	1,160	56	35	9
1959	1,123	55	35	10
1964	1,110	54	4/36	10

1/ Except for 1944, the three kinds of tenure were estimated by assuming that part-owners (included in both ownership and rental) did not subrent their rented land.

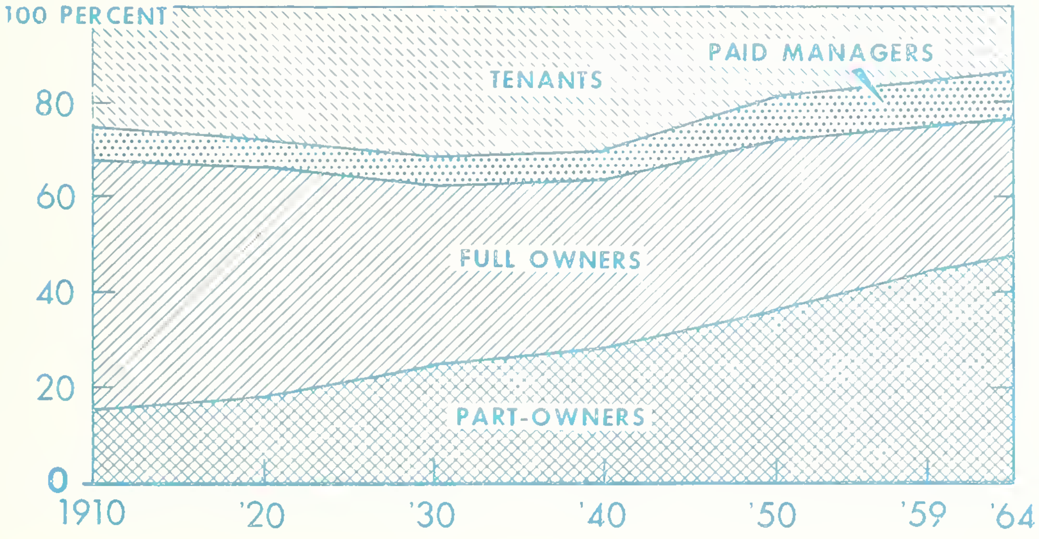
2/ Computed from unrounded data.

3/ Alaska and Hawaii not included.

4/ Estimated by subtracting acreages operated by owners and managers from total acreage.

Source: 1964 Census of Agriculture, vol. II, ch. 8, table 2.

FIG. 3.--PERCENTAGE DISTRIBUTION OF FARMLAND BY TENURE OF OPERATORS



SOURCE: DERIVED FROM THE 1964 U.S. CENSUS OF AGRICULTURE, VOL. II, CH. 8, TABLE 6, P. 764.

U.S. DEPARTMENT OF AGRICULTURE NEG. ERS 8472-71 (12) ECONOMIC RESEARCH SERVICE

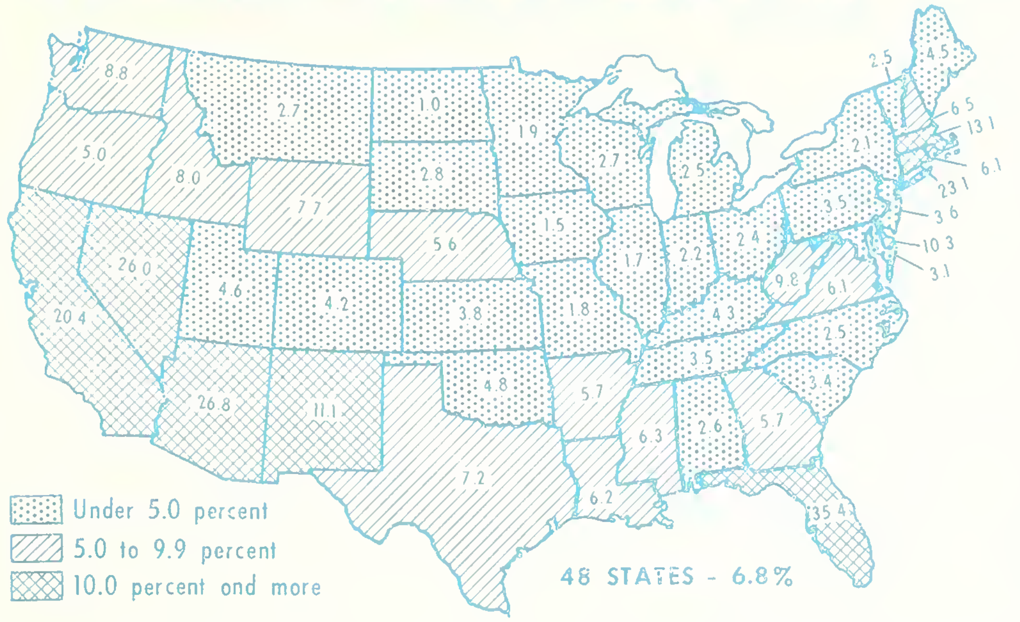
Table 14.--Commercial farms operated by paid managers and their percentage of all farms in each value-of-sales group, 1949, 1954, 1959, and 1964

Value-of-sales group	1949 1/		1954 1/		1959		1964	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
$100,000 or more	2/	2/	2/	2/	2,618	13.1	3,761	12.0
$40,000-$99,999	2/	2/	2/	2/	3,064	3.7	3,021	2.7
$20,000-$39,999	2/	2/	2/	2/	3,384	1.5	2,781	1.1
$10,000-$19,999	2/	2/	2/	2/	3,192	0.7	2,663	0.6
$10,000 and over	12,247	2.5	10,400	1.8	12,258	1.5	12,226	1.4
$5,000-$9,999	4,881	0.7	3,385	0.5	2,494	0.4	1,423	0.3
$2,500-$4,999	1,475	0.2	2,018	0.2	1,611	0.3	856	0.2
$2,500-$9,999	6,356	0.4	5,403	0.4	4,105	0.3	2,279	0.2
Total, $2,500 and over	18,603	0.9	15,803	0.8	16,363	0.8	14,505	0.8

1/ Alaska and Hawaii not included.
2/ Not available.

Source: 1964 Census of Agriculture, vol. II, ch. VI.
1959 Census of Agriculture, vol. II, ch. XI.
1954 Census of Agriculture, vol. II, ch. X.

FIG. 4.--SALES BY COMMERCIAL FARMS OPERATED BY PAID MANAGERS AS A PERCENTAGE OF SALES BY ALL COMMERCIAL FARMS, 1964



U.S. DEPARTMENT OF AGRICULTURE NEG. ERS 8473-71 (12) ECONOMIC RESEARCH SERVICE

Ownership of Farm Businesses

Income tax return summaries are the only published statistical information giving certain characteristics about the ownership organization in farm production. This contrasts with USDA and Bureau of the Census statistics, which are based mainly on farms defined as operating units.

Statistics of income published by the Internal Revenue Service show that from 1958 to 1968 the number of businesses reporting income from farming operations decreased. In the same period, their distribution among sole proprietorships, partnerships, and corporations did not change much, although the proportion of business receipts increased noticeably for corporations 11/.

In 1968, about 3.2 million persons or businesses reported some income from farming. Of these, 96 percent were sole proprietorships with 77 percent of all business receipts from farming; 3 percent were partnerships with 10 percent of all farm business receipts; and the remaining 13 percent were corporations (table 15). In no other major industry group is found such a large number of small business firms, nor so small a corporate share of total business receipts (table 16) [2].

11/ The Internal Revenue Service classifies the landlord's part of share leasing as a separate business.

Table 15.--Legal structure of businesses reporting income from farming, 1958 and 1968

Type of ownership	Number of businesses		Business receipts		Average per return 1/	
	1958	1968	1958	1968	1958	1968
	Thousands		Billion dollars		Dollars	
Sole proprietors	3,343.2	3,042.6	22.4	35.0	6,705	11,503
Partnerships	136.6	109.9	3.4	4.7	25,080	42,766
Corporations	2/8.7	20.0	2/2.2	5.7	249,281	285,000
Total	3,488.5	3,172.5	28.0	45.4	8,028	14,310
	Percent 1/					
Sole proprietors	96	96	80	77	---	---
Partnerships	4	3	12	10	---	---
Corporations	3/	1	8	13	---	---
Total	100	100	100	100	---	---

1/ Computed from unrounded data.
2/ Estimated for 1958.
3/ Less than 0.5 percent.

Source: Internal Revenue Service, unpublished data.

Table 16.--Numbers and receipts of businesses and percentages that are corporate and noncorporate, by selected industries, 1967

Industries	Total businesses			Percentages of total businesses 1/			
				Number		Receipts	
	Number	Receipts	Receipts per business 1/	Corporate	Noncorporate	Corporate	Noncorporate
	Income returns	Million dollars	Dollars	Percent	Percent	Percent	Percent
Mining	73,361	15,123	206,146	20	80	84	16
Contract construction	855,982	92,292	107,819	14	86	72	28
Manufacturing	401,014	588,682	1,467,984	49	51	98	2
Transportation and other public utilities	359,088	106,040	295,305	18	82	94	6
Wholesale trade	434,137	213,196	491,080	33	67	86	14
Retail trade	2,046,209	320,751	156,754	15	85	67	33
Finance, insurance, and real estate	1,222,496	86,670	70,896	33	67	83	17
Service	2,713,942	94,738	34,908	8	92	48	52
Farming	3,166,122	43,545	13,754	1	99	13	87

1/ Computed from unrounded data.

Source: Statistics of Income, 1966 U.S. Business Tax Returns, Internal Revenue Service.

PART-TIME FARMING UNITS

A study of family farms would be incomplete without mentioning small part-time units with farm products sales of less than $5,000. They are mainly family operations. In 1969, there were about 1.5 million such units. This is slightly less than half of the total number of estimated farms and about half of all family farms [18].

These small part-time operations are not the commercial farms of the future, but many of them reflect convenient occupational combinations which provided operators' families with an average net annual income of $7,889 in 1969. This represents a noticeable increase from 1960 and 1964, when that income was $3,638 and $5,080. 12/ Off-farm earnings have always been an important source of family income for these units, and the relative place of such earnings is still increasing. In 1960, off-farm income accounted for 69 percent of total net family income. In 1964, it rose to 77 percent, and in 1969, to 84 percent (table 17).

Despite their decreasing share in farming, part-time units with sales of less than $5,000 are today still a significant part of the farm economy, and are still the source of considerable farm production. More than half of the total farm population--about 5 million persons--lives on these small part-time farming units.

Table 17.--Farms with less than $5,000 of farm products sold, number, total net income from all sources, realized net farm income and off-farm income, 1960, 1964, and 1969 1/

Year	Number	Average net income			
		Total	Farm	Off-farm	Off-farm as a percentage of total
	Farms	Dollars	Dollars	Dollars	Percent
1960........	2,465	3,638	1,128	2,510	69
1964........	2,013	5,080	1,192	3,888	77
1969........	1,509	7,889	1,279	6,610	84

1/ Data are adjusted for census undercounting and differ from other data used in this report.

Source: U.S. Dept. Agr., Econ. Res. Serv. Farm Income Situation, FIS-216, July 1970.

12/ If expressed in 1957-59 prices paid by farmers for items used for family living, the increase in income would be noticeably smaller--$3,600 in 1960; $4,800 in 1964; and $6,400 in 1969.

In 1969, these units accounted for $4.1 billion of realized gross farm income 13/--8 percent of the total realized gross farm income of all farms, and $2 billion of realized operators' net farm income--12 percent of total net farm income (table 18).

While the relative economic importance of farming is decreasing on part-time units, the considerable increase in their income from nonfarm sources indicates that the decreasing number reflects only an adjustment to new economic conditions. Part-time farming is a characteristic of U.S. farming of long standing, and it probably will stay with us for a long time to come.

But an average family income from all sources that provides a more or less satisfactory level of living does not mean that all of these small part-time units are equally well off, nor that all of them have the chance of adjusting to present economic conditions. As is well known, much of the poverty of the farm population is found among these farms, and such poverty units are a fast decreasing group of farms. 14/ An estimate based on census data indicates that families on about 7 percent of these small part-time units (about 100,000) had an average net income in 1969 of less than $3,000--with none of them exceeding $5,000. Their corresponding number in 1960 is estimated to have been 316,000.

Table 18.--Operators' family income on farms with less than $5,000 worth of farm products sold, and as a percentage of all farms, 1960, 1964 and 1969 1/

Item	1960	1964	1969
	Million dollars		
Realized gross farm income	6,187	5,246	4,115
Farm production expenses	3,406	2,847	2,185
Realized net farm income	2,781	2,399	1,930
Operator, family off-farm income	6,187	7,827	9,974
Total operator, family net income	8,968	10,226	11,904
	Percent		
Number	62	58	51
Realized gross farm income	16	12	8
Farm production expenses	13	10	6
Realized net farm income	24	18	12
Operator, family off-farm income	73	68	64
Total operator, family net income	44	42	37

1/ Data are adjusted for census undercounting and differ from other data used in this report.

Source: U.S. Dept. Agr., Econ. Res. Serv., Farm Income Situation, FIS-216, July 1970.

13/ Farm nonmoney income accounted for a fourth of the total realized gross farm income.

14/ Poverty units are found mainly in the Southern States, especially in the Appalachian and Delta States.

Table 19.--Farms classified by number of man-years of hired labor, as a percentage of all farms, by State and region, 1964 1/

State and region	Number of all farms	Man-years of hired labor: None	0.1-0.9	1.0-4.9	5.0-9.9	10.0-14.9	15.0 and over
	Farms	Percent					
Maine	12,875	46.2	35.9	15.1	1.9	0.5	0.4
New Hampshire	4,648	58.8	30.8	9.4	0.6	0.1	0.3
Vermont	9,247	43.[illegible]	43.5	12.4	0.8	0.2	0.1
Massachusetts	8,019	46.7	34.0	15.3	2.4	0.7	0.9
Rhode Island	1,100	45.9	33.3	18.8	0.9	0.3	0.8
Connecticut	6,068	48.3	34.2	13.7	2.3	0.4	1.1
New England	41,957	47.3	36.4	13.8	1.6	0.4	0.5
New York	6[illegible],51[illegible]	5[illegible].8	38.3	9.4	0.9	0.3	0.3
New Jersey	1[illegible],641	48.1	40.0	10.2	1.1	0.3	0.3
Pennsylvania	83,[illegible]	56.3	36.1	6.7	0.5	0.2	0.2
Delaware	4,401	51.2	35.5	11.0	1.3	0.4	0.6
Maryland	2[illegible]	[illegible]3.[illegible]	45.9	11.3	0.9	0.2	0.3
Middle Atlantic	18[illegible],[illegible]98	5[illegible].8	38.3	9.4	0.9	0.3	0.3
[illegible]	[illegible]	5[illegible].5	41.2	4.5	0.6	0.1	0.1
[illegible]	118,816	55.[illegible]	41.5	3.1	[illegible].2	0.1	0.1
[illegible]	131,16[illegible]	52.2	44.9	2.[illegible]	0.1	2/	0.1
Lake States	3[illegible],[illegible]	[illegible]	42.7	3.3	0.3	0.1	0.1
[illegible]	1[illegible],3[illegible]	54.[illegible]	41.6	3.8	0.3	0.1	0.2
[illegible]	[illegible]	[illegible].8	43.3	3.5	0.2	0.1	0.1
[illegible]	[illegible]	[illegible].4	47.8	5.4	0.3	1/	0.1
[illegible]	[illegible],16[illegible]	[illegible]1.6	54.8	3.3	[illegible].1	1/	1/
[illegible]	[illegible]	[illegible].1	59.5	3.1	0.2	0.1	1/
Corn Belt	[illegible]	50.1	[illegible]	3.8	0.2	0.1	0.1
North Dakota	[illegible]	[illegible]2.[illegible]	53.2	4.4	0.2	2/	2/
South Dakota	[illegible]	[illegible].1	48.[illegible]	4.1	[illegible].1	2/	2/
[illegible]	[illegible],16[illegible]	[illegible]8.[illegible]	47.[illegible]	4.0	0.2	2/	2/
[illegible]	[illegible]	[illegible]	5[illegible].5	3.4	0.2	2/	2/
[illegible]	[illegible]	[illegible]6.[illegible]	[illegible]9.[illegible]	3.9	[illegible].2	2/	2/
[illegible]	[illegible]	[illegible]1.1	[illegible]	5.8	[illegible].6	0.1	0.2
[illegible]	[illegible]	6[illegible].[illegible]	[illegible]	2.3	[illegible].2	0.1	0.1
[illegible]	[illegible]	[illegible]	[illegible]	8.8	[illegible].5	0.1	0.1
[illegible]	[illegible]	[illegible]	[illegible]	[illegible].0	[illegible].2	2/	0.1
[illegible]	1[illegible]	[illegible]	[illegible]	3.7	0.3	0.1	0.1
[illegible]	[illegible]	[illegible]	4[illegible].6	5.4	0.[illegible]	0.1	0.1
[illegible]	[illegible]	[illegible]	[illegible]	8.7	1.3	0.3	0.4
[illegible]	[illegible]	[illegible]	[illegible]	9.8	1.0	0.3	0.3
[illegible]	[illegible]	[illegible]	35.6	1[illegible].3	2.4	1.2	2.3
[illegible]	[illegible]	[illegible]	[illegible]	[illegible].8	[illegible].5	0.2	0.2
[illegible]	[illegible]	[illegible]0.1	[illegible]	8.3	1.1	0.4	0.6
[illegible]	[illegible]	[illegible].6	[illegible]4.6	4.5	1.[illegible]	0.5	0.4
[illegible]	[illegible]	[illegible]	[illegible].2	7.4	1.1	0.3	0.3
[illegible]	[illegible]	[illegible]1.[illegible]	[illegible]0.6	6.4	0.9	0.2	0.4
[illegible]	[illegible]	5[illegible]	[illegible].9	5.9	1.0	0.4	0.4
[illegible]	8[illegible]	[illegible]	[illegible]9.7	3.0	0.1	2/	2/
[illegible]	[illegible]	[illegible].9	[illegible].7	10.[illegible]	1.0	0.2	0.2
[illegible]	[illegible]	[illegible]1.[illegible]	39.6	7.9	0.7	0.2	0.2
[illegible]	[illegible]	4[illegible]	9.1	9.4	0.6	0.2	0.1
[illegible]	[illegible]61	[illegible]	50.5	8.0	0.8	0.2	0.2
[illegible]	[illegible]	[illegible]1.6	42.[illegible]	12.9	1.7	0.5	0.3
[illegible]	[illegible]	[illegible]	41.7	14.[illegible]	1.3	0.2	0.3
[illegible]	[illegible]16	[illegible]8.[illegible]	36.[illegible]	13.[illegible]	1.6	0.5	0.4
[illegible]	[illegible]	[illegible]	31.8	21.0	4.7	2.0	2.9
[illegible]	[illegible]	[illegible]3.3	49.[illegible]	6.8	0.7	0.1	0.1
[illegible]	[illegible],17[illegible]	[illegible]	37.1	18.0	3.1	0.8	1.0
[illegible]	1[illegible],[illegible]1[illegible]	[illegible]1.[illegible]	[illegible]	11.2	1.2	0.3	0.4
[illegible]	[illegible]	[illegible]	42.1	9.3	1.[illegible]	0.3	0.3
[illegible]	[illegible]	5[illegible].6	37.5	7.2	1.2	0.2	0.3
[illegible]	8[illegible]	[illegible]	36.7	17.1	3.7	1.2	2.0
[illegible] 1/	[illegible],177	[illegible]4.6	38.[illegible]	12.6	2.4	0.7	1.2
[illegible] 1/	[illegible],17[illegible],[illegible]56	49.8	4[illegible].9	6.2	0.7	0.2	0.2

1/ [illegible] except for farms in Alaska with $100,000 or more of farm products sold [illegible] include institutional farms and differ from other data used in this report.

2/ [illegible] than 0.05 percent.

[illegible] See table 1.

Table 20.--Sales of farm products from farms classified by number of man-years of hired labor, as a percentage of sales of all farm products, by State and region, 1964 1/

State and region	Sales of farm products	Man-years of hired labor					
		None	0.1-0.9	1.0-4.9	5.0-9.9	10.0-14.9	15.0 and over
	Million dollars	Percent					
Maine	258	9.7	26.8	40.2	12.6	4.4	6.3
New Hampshire	51	16.8	36.3	31.4	4.5	2.2	8.8
Vermont	119	19.2	44.5	27.9	4.7	1.7	2.0
Massachusetts	141	14.1	22.8	29.7	11.3	4.8	17.3
Rhode Island	19	14.6	24.7	36.3	8.2	2.6	13.6
Connecticut	139	11.3	23.7	26.0	8.7	1.8	28.5
New England	727	13.1	28.9	32.8	9.6	3.3	12.3
New York	860	18.9	37.1	27.2	7.2	3.5	6.1
New Jersey	219	11.0	22.3	33.4	12.0	5.5	15.8
Pennsylvania	796	24.6	39.6	22.6	4.1	1.8	7.3
Delaware	107	24.9	27.6	23.4	7.9	3.1	13.1
Maryland	278	18.4	36.9	30.3	5.8	1.7	6.9
Middle Atlantic	2,260	20.4	36.0	26.4	6.4	2.9	7.9
Michigan	768	25.5	47.9	17.7	4.2	1.6	3.1
Wisconsin	1,101	37.1	45.9	10.7	2.1	0.8	3.4
Minnesota	1,380	33.0	51.5	11.2	1.8	0.8	1.7
Lake States	3,249	32.6	48.7	12.6	2.5	1.0	2.6
Ohio	1,016	28.1	47.2	15.6	3.3	1.0	4.8
Indiana	1,112	27.1	51.8	15.6	2.3	0.8	2.4
Illinois	2,142	25.4	53.2	17.5	1.6	0.7	1.6
Iowa	2,604	25.8	59.9	12.3	0.8	0.3	0.9
Missouri	1,058	28.8	47.4	18.0	2.8	1.3	1.7
Corn Belt	7,932	26.5	53.7	15.4	1.8	0.7	1.9
North Dakota	572	25.3	56.0	14.6	2.6	0.6	0.9
South Dakota	633	30.1	51.3	15.2	1.6	1.4	0.4
Nebraska	1,345	27.1	46.1	18.0	3.8	2.6	2.4
Kansas	1,174	21.2	52.1	16.3	2.7	2.8	4.9
Northern Plains	3,724	25.5	50.4	16.4	2.9	2.2	2.6
Virginia	471	17.4	38.0	26.4	7.5	2.1	8.6
West Virginia	91	26.9	34.8	19.1	4.4	2.4	12.4
North Carolina	1,073	13.3	48.5	28.7	4.9	1.5	3.1
Kentucky	595	20.8	51.8	19.5	3.0	1.2	3.7
Tennessee	532	23.3	45.5	20.5	4.7	2.2	3.9
Appalachian	2,762	18.0	46.3	24.5	4.9	1.7	4.6
South Carolina	354	13.2	29.4	30.3	11.8	4.7	10.6
Georgia	830	17.4	31.6	30.4	7.9	3.6	9.1
Florida	957	8.8	9.1	13.6	9.3	6.8	52.4
Alabama	535	21.0	36.3	25.7	6.8	4.1	6.1
Southeast	2,676	14.5	24.2	23.5	8.7	5.0	24.1
Mississippi	727	16.6	23.6	20.6	12.3	8.7	18.2
Arkansas	826	15.7	27.3	30.6	11.8	4.7	9.9
Louisiana	403	16.1	28.5	30.6	9.4	3.8	11.6
Delta States	1,956	16.1	26.2	26.9	11.5	6.0	13.3
Oklahoma	605	23.2	50.6	17.3	3.4	1.4	4.1
Texas	2,210	10.9	28.1	36.3	9.5	3.9	11.3
Southern Plains	2,815	13.6	32.9	32.2	8.2	3.3	9.8
Montana	392	17.0	46.7	26.9	4.6	2.3	2.5
Idaho	482	11.6	40.1	26.5	7.5	5.4	8.9
Wyoming	151	15.1	33.2	31.5	9.4	5.3	5.5
Colorado	611	11.7	24.6	32.7	8.3	3.0	19.7
New Mexico	229	9.3	20.1	34.3	14.7	7.1	14.5
Arizona	470	2.4	5.9	24.8	14.2	10.6	42.1
Utah	161	12.3	44.0	27.3	7.2	4.0	5.2
Nevada	53	7.3	18.1	34.5	16.3	7.8	16.0
Mountain	2,549	10.7	28.7	29.0	9.4	5.4	16.8
Washington	638	9.7	35.4	30.4	9.2	3.5	11.8
Oregon	427	13.3	34.1	29.6	9.3	5.6	8.1
California	3,506	5.2	11.3	25.3	14.0	6.9	37.3
Pacific	4,571	6.6	16.8	26.4	12.9	6.3	31.0
United States	35,221	19.4	38.6	22.0	6.2	3.1	10.7

1/ Alaska and Hawaii not included, except for sales by farms in Alaska with $100,000 or more of farm products sold which are included in Washington. Data include institutional farms and differ from other data in this report.

Table 21.--Average wage bill on farms, classified by number of man-years of hired labor, by State and region, 1964 1/

State and region	Average per farm	None	0.1-0.9	1.0-4.9	5.0-9.9	10.0-14.9	15.0 and over
	Dollars						
Maine	1,726	0	577	5,226	16,976	30,458	74,435
New Hampshire	1,206	0	683	5,811	20,296	36,333	87,800
Vermont	1,081	0	586	4,501	17,171	29,765	72,778
Massachusetts	3,198	0	764	6,459	21,766	37,254	135,956
Rhode Island	2,551	0	760	5,947	21,600	34,333	108,667
Connecticut	4,361	0	783	6,677	21,153	36,792	224,913
New England	2,210	0	655	5,621	19,363	33,958	144,157
New York	1,386	0	627	5,435	18,513	33,057	92,703
New Jersey	3,858	0	866	6,207	19,427	35,269	104,786
Pennsylvania	849	0	458	4,770	16,804	29,579	98,916
Delaware	1,544	0	461	4,845	15,103	26,167	91,538
Maryland	1,186	0	527	4,550	15,385	28,356	73,629
Middle Atlantic	1,269	0	552	5,188	17,886	31,930	94,984
Michigan	638	0	417	5,261	18,478	34,387	80,849
Wisconsin	435	0	391	4,449	18,379	31,250	79,027
Minnesota	334	0	344	4,209	16,598	29,622	63,731
Lake States	452	0	379	4,675	18,077	32,500	76,014
Ohio	508	0	320	4,422	15,548	27,292	82,432
Indiana	396	0	304	4,109	15,491	29,017	108,843
Illinois	578	0	411	4,427	18,160	31,467	104,623
Iowa	[illegible]	0	344	4,144	17,971	32,417	125,270
Missouri	315	0	286	4,057	14,032	25,756	70,306
Corn Belt	[illegible]	0	337	4,253	16,046	28,485	92,885
North Dakota	512	0	502	4,220	17,970	28,923	62,769
South Dakota	[illegible]	0	397	4,154	16,828	30,100	68,800
Nebraska	562	0	387	5,021	19,772	34,282	76,033
Kansas	415	0	375	4,748	17,850	33,146	72,133
Northern Plains	444	0	407	4,608	18,393	32,748	71,675
Virginia	[illegible]	0	289	3,685	12,555	23,302	66,189
West Virginia	280	0	189	3,288	11,357	20,350	82,886
North Carolina	[illegible]	0	428	3,210	11,413	21,098	58,991
Kentucky	[illegible]	0	[illegible]	2,761	10,476	18,737	55,235
Tennessee	[illegible]	0	202	2,656	9,448	16,686	48,663
Appalachian	[illegible]	0	292	3,113	11,132	19,768	60,743
South Carolina	[illegible]	0	[illegible]	2,809	8,994	15,587	43,172
Georgia	[illegible]	0	[illegible]	2,947	9,810	17,217	43,792
Florida	[illegible]	0	408	4,130	13,344	23,082	119,045
Alabama	[illegible]	0	272	2,796	9,381	16,460	51,023
Southeast	[illegible]	0	316	3,100	10,690	19,514	89,918
Mississippi	[illegible]	0	236	2,945	9,332	16,864	42,706
Arkansas	[illegible]	0	379	4,082	13,025	22,946	57,566
Louisiana	[illegible]	0	331	3,519	11,746	20,484	63,309
Delta States	693	[illegible]	302	3,551	11,158	19,244	51,748
Oklahoma	376	0	416	4,874	18,495	32,294	123,348
Texas	989	0	456	4,440	14,686	26,600	68,948
Southern Plains	804	0	444	4,489	14,888	27,000	71,410
Montana	1,078	0	703	5,208	18,726	34,225	59,147
Idaho	1,331	0	699	6,641	22,724	40,103	94,048
Wyoming	1,810	0	739	5,848	19,314	35,061	71,464
Colorado	1,503	0	553	4,894	16,589	28,914	93,989
New Mexico	[illegible]	0	556	5,296	17,701	30,123	104,238
Arizona	8,971	0	948	8,109	23,799	40,606	175,892
Utah	904	0	487	5,784	18,627	34,600	86,333
Nevada	3,477	0	821	7,294	21,727	39,611	88,667
Mountain	1,753	0	643	5,763	19,761	35,752	121,136
Washington	1,691	0	702	7,133	22,943	43,708	121,282
Oregon	1,373	0	603	7,073	23,329	39,541	103,814
California	6,886	0	945	8,703	26,741	46,634	171,588
Pacific	4,142	0	792	8,161	25,883	45,762	164,154
United States	869	0	395	4,630	16,629	29,377	103,833

1/ Alaska and Hawaii not included, except for farms in Alaska with $100,000 or more of farm products sold which are included in Washington. Data include institutional farms and differ from other data in this report.

Source: Special tabulation of the 1964 Census of Agriculture made available by the Bureau of the Census.

Table 22.--Average annual sales of farm products on farms classified by number of man-years of hired labor, by State and region, 1964 [1]

State and region	Average value of sales	Man-years of hired labor					
		None	0.1-0.9	1.0-4.9	5.0-9.9	10.0-14.9	15.0 and over
	Dollars						
Maine	20,046	4,217	14,949	53,400	132,211	192,492	351,870
New Hampshire	10,967	3,139	12,942	36,511	85,926	183,000	298,800
Vermont	12,845	5,740	13,124	28,891	73,868	118,059	260,333
Massachusetts	17,557	5,288	11,773	34,071	82,542	115,627	357,926
Rhode Island	17,368	5,529	12,874	33,498	156,500	165,000	289,667
Connecticut	22,989	5,370	15,947	43,824	88,584	103,583	575,217
New England	17,333	4,779	13,797	41,084	101,754	144,435	415,032
New York	12,937	5,071	11,994	34,713	82,891	142,788	271,472
New Jersey	20,571	5,899	13,262	32,074	70,667	128,161	274,683
Pennsylvania	9,578	4,188	10,491	32,315	82,204	119,537	288,327
Delaware	24,334	11,826	18,953	51,810	146,121	183,000	538,154
Maryland	13,371	5,654	11,258	35,988	89,302	104,200	274,329
Middle Atlantic	12,189	4,886	11,483	34,248	82,887	132,182	298,150
Michigan	8,211	3,907	9,548	32,080	63,655	109,495	241,081
Wisconsin	9,266	6,256	10,245	31,478	85,409	144,922	331,910
Minnesota	10,524	6,651	12,082	44,086	130,263	240,022	337,090
Lake States	9,459	5,764	10,799	35,552	82,890	146,500	300,700
Ohio	8,437	4,380	9,562	35,020	82,328	117,955	247,402
Indiana	10,291	5,281	12,306	44,819	117,093	155,932	391,771
Illinois	16,131	8,818	17,948	52,343	105,526	243,883	328,047
Iowa	16,889	10,415	18,458	63,545	215,765	219,278	597,730
Missouri	7,179	3,618	8,610	41,347	104,116	154,600	277,731
Corn Belt	11,968	6,335	14,041	48,309	108,473	168,075	317,649
North Dakota	11,723	7,024	12,364	39,195	148,040	262,538	382,923
South Dakota	12,730	8,137	13,415	47,299	174,000	925,900	230,600
Nebraska	16,773	9,305	16,467	76,226	340,503	914,513	1,088,033
Kansas	12,703	5,870	13,105	60,545	237,150	815,610	1,913,200
Northern Plains	13,735	7,553	13,959	58,379	243,573	793,961	1,172,542
Virginia	5,857	1,994	5,282	26,611	68,656	101,167	255,038
West Virginia	2,647	1,100	2,833	22,506	47,726	109,300	257,023
North Carolina	7,239	2,617	6,538	23,458	73,734	121,383	282,802
Kentucky	4,471	2,035	4,627	22,120	58,625	119,860	218,108
Tennessee	3,988	1,857	3,853	22,286	56,104	98,479	232,652
Appalachian	5,215	2,024	5,074	23,501	65,366	109,578	250,231
South Carolina	6,301	1,798	4,319	21,941	58,184	92,246	189,490
Georgia	9,961	3,617	7,731	31,065	79,196	123,164	283,306
Florida	23,598	4,120	6,427	31,078	91,232	129,541	549,784
Alabama	5,777	2,231	5,382	25,567	73,770	125,649	248,938
Southeast	9,814	2,834	6,016	27,782	77,215	121,442	429,395
Mississippi	6,663	1,880	4,515	30,426	80,683	129,746	274,658
Arkansas	10,337	2,774	8,767	42,979	106,451	150,008	338,116
Louisiana	6,452	1,686	6,021	30,807	70,453	95,441	182,527
Delta States	7,778	2,111	6,184	35,508	87,731	129,419	266,270
Oklahoma	6,820	2,766	8,690	39,994	188,349	249,882	1,078,739
Texas	10,775	2,417	7,636	38,926	107,248	185,002	516,688
Southern Plains	9,581	2,534	7,955	39,047	111,539	189,450	542,125
Montana	14,513	6,074	13,808	41,359	108,643	222,350	288,353
Idaho	16,252	4,669	12,898	54,002	161,489	444,586	693,629
Wyoming	16,675	5,898	13,174	40,744	90,936	163,592	298,321
Colorado	20,513	5,676	12,106	47,135	136,043	259,643	1,265,684
New Mexico	16,119	3,096	9,023	41,503	145,939	248,246	528,429
Arizona	72,642	4,577	13,550	85,733	220,207	378,553	1,070,443
Utah	10,212	2,886	9,183	41,046	105,655	321,500	464,833
Nevada	24,414	4,438	11,929	46,861	129,879	227,833	400,381
Mountain	19,008	4,836	12,156	49,080	147,200	304,219	848,814
Washington	13,987	2,877	11,776	45,574	124,817	186,083	528,014
Oregon	10,747	2,660	9,775	43,989	86,567	243,786	337,098
California	43,370	5,708	13,364	64,179	164,145	246,930	794,304
Pacific	27,507	4,022	12,047	57,633	150,276	240,588	749,646
United States	11,172	4,351	10,053	39,614	107,593	182,691	496,238

[1] Alaska and Hawaii not included, except for farms in Alaska with $100,000 or more of farm products sold which are included in Washington. Data include institutional farms and differ from other data in this report.

Source: Special tabulation by the Bureau of the Census for the 1964 Census of Agriculture.

REFERENCES

(1) Brewster, John M.
1970. A Philosopher Among Economists: Selected Works of John M. Brewster. J.T. Murphy Co., Philadelphia, Pa. 19120. Ch. 8, pp. 175-207.

(2) Coffman, George W.
1971. Corporations With Agricultural Operations. U.S. Dept. Agr., Agr. Econ. Rpt. 209, June.

(3) Harris, Marshall
1969. Shifts in Entrepreneurial Functions in Agriculture. Amer. Jour. Agr. Econ. 51: 517-529, Aug.

(4) Mighell, Ronald L., and Jones, Lawrence A.
1963. Vertical Coordination in Agriculture. U.S. Dept. Agr., Agr. Econ. Rpt. 19, Feb.

(5) National Agricultural Advisory Commission
1963. The Family Farm in American Agriculture. Congressional Record 109 (187): 21304-21309, Nov. 19.

(6) Nikolitch, Radoje
1962. Family and Larger-Than-Family Farms. U.S. Dept. Agr., Agr. Econ. Rpt. 4, Jan.

(7) ________
1962. Family Labor and Technological Advance in Farming. Jour. Farm Econ. 44: 1061-1068, Nov.

(8) ________
1965. The Expanding and the Contracting Sectors of American Agriculture. U.S. Dept. Agr., Agr. Econ. Rpt. 74, May.

(9) ________
1965. The Adequate Family Farm--Mainstay of the Farm Economy. U.S. Dept. Agr., ERS-247, Sept.

(10) ________
1967. A Comparison of Age Levels of Farmers and Other Self-Employed Persons. U.S. Dept. Agr., Agr. Econ. Rpt. 126, Nov.

(11) ________
1969. Family Operated Farms: Their Compatibility with Technological Advance. Amer. Jour. Agr. Econ. Vol. 51, pp. 530-545, Aug.

(12) ________
1970. Our 31,000 Largest Farms. U.S. Dept. Agr., Agr. Econ. Rpt. 175, Mar.

(13) ________
The Individual Family Farm. Chapter 14 in Heady, Earl O., and Ball, Gordon A., eds., The Size, Structure, and Future of Farms. In press, Iowa State University Press, Ames, Iowa.

(14) Parsons, Merton S.
1961. Farm Machinery: A Survey of Ownership and Custom Work, U.S. Dept. Agr., Statis. Bul. 279, Mar.

(15) Strickler, Paul E. and Smith, Helen V.
1966. Use of Agricultural Machinery in 1964. U.S. Dept. Agr., Statis. Bul. 377, July.

(16) U.S. Department of Agriculture
1970. The Balance Sheet of the Farming Sector 1969. U.S. Dept. Agr., Agr. Inform. Bul. 340, Jan.

(17) ________
1970. Changes in Farm Production and Efficiency: A Summary Report. U.S. Dept. Agr., Statis. Bul. 233, revised June.

(18) ________
1970. Farm Income Situations. U.S. Dept. Agr., FIS-216, July.

(19) ________
Farm Labor Statistical Reporting Service--monthly reports.

(20) U.S. Department of Commerce, Bureau of the Census.
1968. 1964 Census of Agriculture, vol. 3, special report, part 2, May.

(21) ________
1967. 1964 Census of Agriculture, vol. 2, ch. 5, table 18, pp. 557 and 558.

APPENDIX

Measurement of Hired Labor on Farms

In this report, farms are classified by the number of man-years of hired labor used. Man-years of hired labor were determined by dividing the expenditure for labor by the estimated average annual cost for hiring a full-time male farmworker.

To estimate the cost of a man-year of hired labor, the average monthly wage of a worker furnished with a home was taken as representative of a full-time male worker [19]. Such a monthly wage was multiplied by 12 to obtain an annual wage for 32 States. For the 16 Southern States, for which the annual average farm wage rates were given on a per day basis only, 26 working days per month were assumed. Alaska and Hawaii were not included. An estimate was made for each State separately. Regional and U.S. figures are weighted averages of those of all States in each region and of 48 States for the United States.

Family Labor Supply

The available labor supply of the average farm family was estimated to be 1.5 man-years. This estimate was based on numbers of persons by age groups as reported in the 1964 Census of Agriculture [21].

Only persons in farm operator households over 14 years of age were considered--their labor was converted into man-years of available labor on the following basis:

Males 14 to 64 years.................	1 man-year
Males 65 and over....................	1/2 man-year
Females 14 to 64.....................	1/4 man-year
Females 65 and over..................	1/8 man-year

States by Farm Production Regions (USDA, ERS)

Northeast
  - New England
    - Maine
    - New Hampshire
    - Vermont
    - Massachusetts
    - Rhode Island
    - Connecticut
  - Middle Atlantic
    - New York
    - New Jersey
    - Pennsylvania
    - Delaware
    - Maryland

Lake States
  - Michigan
  - Wisconsin
  - Minnesota

Corn Belt
  - Ohio
  - Indiana
  - Illinois
  - Iowa
  - Missouri

Northern Plains
  - North Dakota
  - South Dakota
  - Nebraska
  - Kansas

Appalachian
  - Virginia
  - West Virginia
  - North Carolina
  - Kentucky
  - Tennessee

Southern Plains
  - Oklahoma
  - Texas

Southeast
  - South Carolina
  - Georgia
  - Florida
  - Alabama

Delta States
  - Mississippi
  - Arkansas
  - Louisiana

Mountain
  - Montana, Idaho
  - Wyoming, Colorado
  - New Mexico, Arizona
  - Utah, Nevada

Pacific
  - Washington
  - Oregon
  - California
  - Alaska
  - Hawaii

States by Geographic Regions (Census of Agriculture)

New England

- Maine
- New Hampshire
- Vermont
- Massachusetts
- Rhode Island
- Connecticut

Middle Atlantic

- New York
- New Jersey
- Pennsylvania

East North Central

- Ohio
- Indiana
- Illinois
- Michigan
- Wisconsin

West North Central

- Minnesota
- Iowa
- Missouri
- North Dakota
- South Dakota
- Nebraska
- Kansas

South Atlantic

- Delaware
- Maryland
- Virginia
- West Virginia
- North Carolina
- South Carolina
- Georgia
- Florida

East South Central

- Kentucky
- Tennessee
- Alabama
- Mississippi

West South Central

- Arkansas
- Louisiana
- Oklahoma
- Texas

Mountain

- Montana
- Idaho
- Wyoming
- Colorado
- New Mexico
- Arizona
- Utah
- Nevada

Pacific

- Washington
- Oregon
- California
- Alaska
- Hawaii

UNITED STATES DEPARTMENT OF AGRICULTURE
WASHINGTON, D.C. 20250

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE

U.S.MAIL

☆ U. S. GOVERNMENT PRINTING OFFICE 1972 O 483-194 (ERS-69)